



**Fishery and ecological indices for assessing alternative fishing methods:
trap versus trammel nets in Mediterranean spiny lobster fishery**

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Palinurus elephas is the most commercially important spiny lobster species in the Mediterranean and North-eastern Atlantic. Traditionally, the spiny lobster was captured by means of traps/pots but a major change in the exploitation strategy took place during the 1970s with the progressive introduction of trammel net and the totally replacement of traps by early 2000s. In our study, fishing and ecological impacts of traps and trammel net are compared by using a set of simple efficiency indicators developed with the aim to facilitate managers the comprehension of the ecological and socio-economic consequences of each fishing method. A total of 746 hauls (408 from trammel netters and 338 from trappers) were analyzed on board during the annual fishing season from 1998 to 2002. Target (lobster) and by-catch specimens were sampled. The species composition, individual size and the fate of all macro-benthic species was registered. The catch of each species was expressed as the number and weight of individuals per set. A set of indicators were developed: Lobster Stock Use efficiency, Ecological Use Efficiency, Vulnerable Use Efficiency, Waste Use Efficiency and Labour Efficiency, for both the lobster and total retained catch. In number, lobster made a greater proportion of the commercial catch of trammel nets than of traps, as did the proportion of lobster damaged that could not be marketed. The proportion of the commercialized catch of traps was twice that of trammel-nets. The efficiency indices are presented in standardized, comparable form and are intended to provide a basis for assessing the relative merits of different fishing methods targetting the same species.